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FOREST PEST MANAGEMENT
Pacific Southwest Region

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PRELIMINARY EVALUATION OF THE PEST SITUATION AT THE ZEPHYR COVE SPECIAL USE AREA, LAKE TAHOE BASIN MANAGEMENT UNIT

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ABSTRACT

Vegetation in the Zephyr Cove area is primarily Jeffrey pine in the overstory, with inclusions of white fir on the better sites. Brush species include bitterbrush, snowbrush, and manzanita. Jeffrey pine beetle activity was observed in the cabin area and mountain pine beetles had attacked lodgepole pine in the riparian area. Western dwarf mistletoe infects Jeffrey pine on both sides of Highway 50. Excessive stocking levels are a concern throughout, and soil compaction is a problem in the resort/cabin and campground areas.

INTRODUCTION

At the request of Jon Hoeffer, Planner, LTBMU, I made a walk-through of the Zephyr Cove Area that is under a special use permit. This was completed between July 9-11, 1984. The Unit is conducting a future use determination for the area and desired information on the present pest conditions for inclusion in the analysis.

The area occupies about 40 acres and presently has several facilities. A restaurant-lodge and individual cabin units are between Lake Tahoe and Highway 50, adjacent to a marina. North of the marina is a beach and day-use picnic area. This west-side of the highway is primarily used for developed recreation.

A campground for RV use and a riding stable are on the east side of the highway. Beyond these areas are less developed lands traversed by horse trails. The management objective of the entire area at present is for developed recreation, with facilities operated by a special-use permittee.

Because of the uncertainty as to the use of some areas and the possibility of the addition of new facilities, I decided not to do an intensive survey at this time, but rather to gather information for an overview of the area. Enough detail was obtained to provide recommendations, from a pest management perspective, as to activities that would promote a healthy, vigorous forest for each area. The types of activities and the amount of work required can be used by the Unit in their decision-making as to what use selected areas may receive. Once these decisions are made, a detailed examination of specific areas by FPM may be appropriate and should be requested.

OBSERVATIONS

Lodge/Cabin Area

An even-aged Jeffrey pine stand with a few incense-cedars and white firs in the understory is present in this area. Brush species, principally chinquapin, manzanita, and bitterbrush, are scattered lightly throughout, with some grassy patches also present. Although site quality was not determined, stocking levels appear high, as indicated by basal areas up to 510 sq.ft./ac. These heavily stocked aggregates are interspersed by small (approximately 1/20-1/10 acre) openings in the stand. There is little brush or duff in the cabin area and soil compaction from vehicles and foot traffic is considerable.

Several dead and dying Jeffrey pines were observed. One, behind cabin 10, succumbed to Jeffrey pine beetle (Dendroctonus jeffreyi) in 1983. Near cabin 8 is an older dead Jeffrey pine with one nearby being attacked at mid-bole by Jeffrey pine beetle. Two Jeffrey pines behind cabins 11 and 12 are declining and may be under attack by Jeffrey pine beetle, although no direct evidence was noted.

Beach/Day-Use Area

This area extends north of the snack bar and marina to private property and from the beach to Highway 50. The overstory is even-aged Jeffrey pine with lodgepole pine, white fir, and quaking aspen in the understory. At the south end along the creek, willow and wild rose are the principal brush species. Farther north on a drier site, bitterbrush and chinquapin are more common. Little duff is present in the picnic area, but the amount increases to the north in the general forest area.

A lodgepole pine near the stream has been successfully attacked by mountain pine beetle (D. ponderosae). An adjacent lodgepole pine was unsuccessfully attacked, as evidenced by white pitch tubes on the bole. Western dwarf mistletoe (Arceuthobium campylopodum) is present in Jeffrey pine beginning near the beach about 100 yards north of the stream and continuing northward 150 to 200 feet. The infestation extends east to the highway and increases in amount of area occupied and severity.

Riding Stable - North and East

This area encompasses the riding stable and the less developed land on the east side of Highway 50 north of the stream and eastward. Horse trails from the stable traverse much of the general forest area.

This area is occupied by several different vegetation conditions. In the flatter areas along the highway, the overstory is comprised of Jeffrey pine and white fir. It is a smaller size class than on the west side of the highway. The stocking is high with basal areas greater than 300 sq.ft./ac. common. The principal brush species are manzanita and bitterbrush, especially in openings. Western dwarf mistletoe is light to moderate in the Jeffrey pine.

Uphill to the east, the site becomes rockier and harsher. Stocking is lower and tree size is smaller. The principal brush species are snowbrush and bitterbrush. The intensity of dwarf mistletoe infection is higher. Numerous dead pole-size white firs are present. Stumps and dead trees throughout this area indicate that there has been a relatively constant level of bark beetle activity over the years.

East of the stables is an even-aged Jeffrey pine stand with a small proportion of white fir. The stocking level is lower and the stand is more open. Dwarf mistletoe was not observed. Farther east, going up the hill, dwarf mistletoe infections are again encountered at low levels. The infestation continues along the upper part of the hill to the east of the campground. Near the top of the hill east of the campground, some large incense-cedars and sugar pines are present.

Campground

The campground is a relatively flat area that rises to the east. It is partly bounded on the north by a stream and riparian area. Vegetation in the riparian area consists of alder, quaking aspen, and willow. In the campground is an even-aged Jeffrey pine stand. Stocking levels are about 300 sq.ft./ac. There is no litter or duff layer and very little ground vegetation, except for some patches of grass. Several dead white firs are scattered in the campground. Uphill to the east and south, tree sizes are smaller and the proportion of white fir increases. Southeast of the campground is a pocket of dead, declining, and windthrown white fir that are infected by Fomes annosus.

RECOMMENDATIONS

Throughout the entire special use area, stocking level adjustments would benefit the residual vegetation. Favoring the dominant and codominant Jeffrey pines and removing other trees to reach the proper stocking levels would be the most appropriate action. In the wetter, higher site areas, white fir can be retained as appropriate, but their retention in the more marginal areas is questionable. Dwarf mistletoe is another consideration when selecting leave trees in an area. Lightly infected trees can be managed, but those heavily infected should be removed.

If the present facilities are retained in a condition similar to that at present, better control of vehicle and foot traffic is advised in the resort and campground areas to reduce tree damage and compaction. Both artificial and natural barriers are appropriate. Native brush may be encouraged to control traffic flow and to help alleviate some of the existing compaction.

Additional facilities and development may be considered for the area. Consideration of existing pests, principally dwarf mistletoe, should be included in site selection if a forested situation is to be important to the facility. The existence of dwarf mistletoe in an area does not preclude selection for development. However, special actions may be necessary prior to and during development in order to ensure the longevity and vigor of the vegetation on the site. The specific actions will need to be determined for the actual site after it is selected.

After the future use determination is completed and decisions are made on the use of the area, it is recommended that the LTBMU request site-specific evaluations by FPM, if appropriate and necessary.